THE CHEMIST

JANUARY 1951 VOLUME XXVIII No. 1

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(See Page 3)

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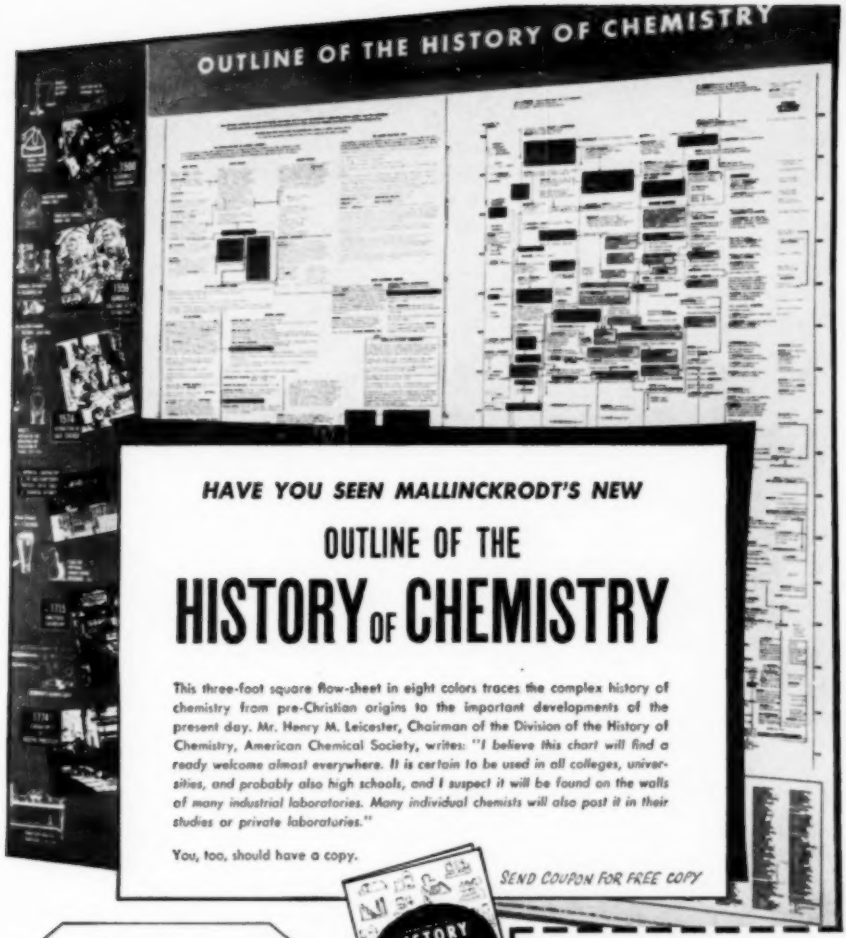

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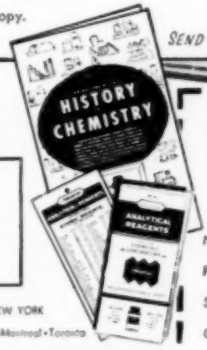

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The CHEMIST

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Publication of

THE AMERICAN INSTITUTE OF CHEMISTS, INC.

60 East 42nd Street, New York 17, N. Y.

Volume XXVIII | January 1951 | Number 1

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Entered as second class matter April 8, 1936, at the Post Office at New York, N.Y., under Act of August 24, 1912. Issued monthly at 60 East 42nd Street, New York 17, N. Y. Subscription price, $2.00 a year to Members $3.00 to Non-Members. Single copy, this issue $0.25. Copyright, 1951 by THE AMERICAN INSTITUTE OF CHEMISTS, INC.

SCHEDULED FOR EARLY ISSUES

The Increasing Responsibilities of the Chemist, by Ralph Lamenzo, F.A.I.C.
Employment Project News
Award of Honorary Membership to Jerome Alexander, F.A.I.C.
A Chemist Looks on Life, Jerome Alexander, F.A.I.C.
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Cover Picture

Burt Wetherbee, chairman of the Niagara Chapter, AIC, was born in New Hampshire in 1906 and received the Bachelor and Master degrees from Tufts College and the University of Florida. His industrial chemical work was largely in the rubber and textile fields until 1943, when he started the Wetherbee Chemical Company to represent several prominent companies as sales and technical representatives in New York and Michigan. He has published articles in the *Rubber Age* and the *India Rubber World*. He initiated the organization of the Buffalo Rubber Group of the Division of Rubber Chemistry of the American Chemical Society, and has been chairman and has served on its executive board almost continuously. His memberships include the American Chemical Society, the Society of Automotive Engineers, The Chemists' Club and other associations.

The Niagara Chapter's objective of applying the principles of our national organization to the grass roots of its local members will take on real substance in 1951, since the Niagara Chapter is host to the National Meeting of THE AMERICAN INSTITUTE OF CHEMISTS, to be held in Niagara Falls, Ontario, in May, 1951.

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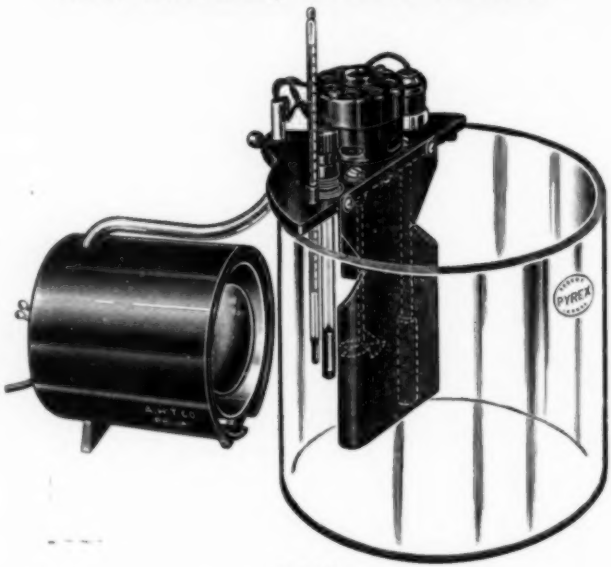

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EDITORIAL

Should We File a Patent Application?

Dr. Eduard Farber, F.A.I.C.

Chief Chemist, Timber Engineering Co., 1319-18th Street, N.W., Washington, D. C.

When a new idea has been developed, or when an investigation leads to an unexpected and promising result, the question has to be answered, whether an invention worth patenting has been made. The word, worth, in this connection, may contain many judgments. The invention may be judged as opening a field of commercial work, or it may round it out as an addition to previous inventions. Its value can consist in reserving a possible future extension of interests, or in preventing others from interfering with present operations.

With all this in mind, the important additional question remains to be answered, when to file the application for a patent. Two recent decisions of the U. S. Court of Custom and Patent Appeals illuminated some aspects of this many-faceted question which seemed of general interest.

In these brief remarks I do not intend to touch the problems of formulating patent applications! I am not a patent attorney or examiner, and I am here specifically interested in presenting some aspects of the situations which precede the formal filing.

The first of the two court decisions affirmed the rejection of a patent application by Examiner and Board of Appeals (1). The invention consisted of a process of producing polymers of dihydropyran by treating the monomer with a Friedel-Crafts catalyst. The polymers were described as varying from viscous liquids to hard resins of various melting points. The patent was not denied because it lacked novelty or invention, but because "we feel certain that the law requires that there be in the application an assertion of utility and an indication of the use or uses intended.

"It was never intended that a patent be granted upon a product, or a process producing a product, unless such product be useful".

Has this application been filed too early? Should the inventor—or his assignee— have waited to establish uses for the new polymers? The additional work would certainly have cost much less than the appeals to Board and Court!

The second of the two decisions (2) concerned a case which is the opposite of the foregoing with respect

(1) Official Gazette 638, p. 6 (Sept. 5, (1950)

(2) Official Gazette 641, p. 1015 (Dec. 26 1950)

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to the timing of an application. It appears from the record that a new diazo-dyestuff was found by a chemist of a large chemical company in June, 1939. The dyestuff was excellent in light-fastness, but not satisfactory in drawing upon Nylon. The Sales Division decided against it. The chemist was persistent and caused further tests to be made on mixtures containing the new diazo-dyestuff. Finally, in June, 1943, an application was filed. In the meantime, however, another inventor had filed an application just about a year before. Priority was awarded to him, because the earlier date of conception could not be admitted as a date of successful reduction to practice. An invention was lost to its originator, because somebody waited too long before adding that step of reducing to practice, or showing confidence in the invention, which consists in applying for a patent. The effort of formulating the application and filing fee might have been spent on an invention which may have proven impractical; compare this possible loss with the expenses involved in the legal proceedings to save the invention later on!

It is no refutation of these thoughts to say that it is always easy to be wise after the event; let us be wise in this way, and let us use such experiences to help our decisions in future cases!

Patentable invention was involved in both the cited cases. In judging possible patentability before filing an application, it will be good to keep in mind what Supreme Court Justice Douglas has to say about another very recent case: "It is not enough that an article is new and useful. The Constitution never sanctioned the patenting of gadgets. Patents serve a higher end—the advancement of science." ([2])

([2]) Official Gazette 642, p. 7 (Jan. 2, 1951

Moved

The Philip J. Lo Bue Company, manufacturer and distributor of chemicals for industry, has moved to new quarters at 277 Park Avenue, New York 17, N. Y.

The Easy Way and the Individual

Leon M. Prince, Jr., F.A.I.C.

President, Emulsion Chemical Co., Inc., Staten Island, N.Y.

(One of a series of papers prepared by members of, and reviewed before publication by the Chemists' Advisory Committee, New York Chapter, A.I.C.)

IT HAS been wisely said that there is nothing so practical as a sound theory. As a boy, the writer witnessed one of the first million-volt artificial lightning experiments conducted by General Electric. Among other things, the company wanted to make better lightning arrestors and reasoned that the way to do it was to learn more about natural lightning. Once a sound theory was evolved, the manufacture of better lightning arrestors would be a matter of course. Expensive as were these experiments, it was the most direct way of reaching the objective. Where large sums of money are available, this approach is the elegant way of doing a job and because, in the long run it reduces experimentation, saves time and money, it is the easy way.

In a parallel way, many large chemical companies spend relatively large amounts of time and effort developing theories which are applicable to their industries. They appreciate that new, sound theories ultimately lead to new or improved products or give them an edge over the competition in production techniques. They know, too, that every once in a while theory will abruptly open up new vistas, the products of which would normally have been attained via the slow step-by-step process of the arts. A few of the small companies can and do indulge in this kind of luxury also but, more often than not, find that this practice overtaxes their financial resources due to the time element involved. But even if they are fortunate in finding an applicable theory rapidly, the stimulation given to the whole organization is often just too rich for their blood. It may mean building a new plant to make the new products or assuming some other risk which is felt to be unwarranted at the time. To the individual chemist in his own tiny business, such complications rarely present themselves. Instead by carefully assessing his fortes he can frequently bridge the gap between theory and practice in a surprisingly gratifying manner.

There are many spots in the chemical industry where there is room for the small, individually operated business to apply the latest theories to

practical, every-day problems. These problems may be somebody else's, in which case the individual acts as a consultant, or they may be those which once-solved, result in a product or products which can be advantageously marketed. In these endeavors, the individual enjoys unique advantages over the theoretician working in a large organization. He can move faster in any direction that seems promising. He does not have to ask for approval to proceed, or for a project to be established, or for funds to be allocated. He can sometimes have an answer before the larger organization begins to move. He does not have to combat apathy to the benefits of a theoretical program, or, indeed, management's aversion to accepting the obvious implications of its conclusions. Frequently, too, the individual can do a given job faster and cheaper. For this, the individual, or his client, is rewarded in measures ordinarily reserved for much larger operating units.

The key to success for the individual theoretician appears to lie in specialization. This is not a restrictive term by any means. It implies that a chemist limit himself to a given subject, e.g. emulsions. But this crosses many fields of applied chemistry; cosmetics, soaps, detergents, waxes, food products, insecticides, vegetable and mineral oils and many others, as well as the fields of organic, inorganic, physical and colloid chemistry. By concentrating his efforts in a few of the applied fields in which his primary subject is important, he can contribute something extra. This may take many forms: a new technique, an improvement of an old process or the development of radically new products. A typical example of the application of the principles of colloid chemistry occurred in connection with Chlordane, a new insecticidal toxicant. The pest control industry was having difficulty with the currently available emulsions. The dense, viscous liquid toxicant was precipitating from the emulsions and clogging nozzles and strainers. It was reasoned that if the particle size of the emulsions could be brought below 0.3 micron in diameter, Brownian Movement would permanently inhibit any sedimentation. Once suitable emulsifying agents were found, the undesirable precipitation was eliminated even though the toxicant has a density of 1.6. Emulsions are presently available which remain homogenously dispersed in water for over a year.

Implicit in the concept of specialization, is an intimate working knowledge of the art. This is an indispensable tool to the practical theoretician. It is the yardstick by which he can measure the limitations of the theory and it defines the problems, old or new, which need solving. Since the art is often ahead of theory it can be a guide to theoretical interpretations

of value. The art, with its profusion of infinitesimal details, is also a fertile source of clues to the solution of problems. The priceless asset of the individual theoretician is his approach to the practical problem; and the skill with which he is able to blend art and theory is the hallmark of his usefulness to industry.

Hamor to Receive Pittsburgh Award

Dr. William A. Hamor, F.A.I.C., assistant director of Mellon Institute, was named by the Pittsburgh Section of the American Chemical Society to receive its Pittsburgh Award for the year 1950. The award, a bronze plaque which is granted annually for outstanding service to chemistry, was presented to Dr. Hamor at a dinner in the University Club of Pittsburgh, December 21st.

In a long and productive career, Dr. Hamor has achieved prominence for his noteworthy accomplishments in research management, and for his authorship and editorship of numerous scientific publications. A graduate of the University of Pittsburgh, he has received honorary doctorates, from the University of Pittsburgh, Grove City College, the University of Louisville, and the University of Miami. Since 1947, Dr. Hamor has served as editor of Chemical Monographs for the American Chemical Society. He is a member of various technical societies and has served on several important governmental agencies, including the Scientific Personnel Committee of the U. S. Atomic Energy Commission and the Scientific Manpower Branch of the War Department, General Staff. He is a member of the Research Advisory Council of the Industrial Hygiene Foundation of America.

Avedikian Cited

Dr. Souren Z. Avedikian, 58 Willow Avenue, Larchmont, N.Y., has been awarded a "Commendation for Meritorious Civilian Service for Outstanding Performance of Duty", by the Department of the Army. He is president and technical director of Tidings Corporation of America, Larchmont and Mamaroneck, N.Y.

The citation reads: "For exceptional meritorious performance of duty as Senior Chemical Engineer in the New York Chemical Procurement District from 17 September 1940 to 27 June 1947. His unusual capacity for work and getting jobs done, his undertaking tasks cheerfully, solving problems readily, and his outstanding loyalty, initiative and performance in administrative and technical matters above and beyond the call of duty were inspirational to his associates and important factors in the production of Chemical Corps materiel in adequate quantity and quality when most needed."

Invitation to New Orleans

H. A. Levey, F.A.I.C., representative to the AIC National Council from the Louisiana Chapter, visited the AIC headquarters office in New York in November. He invites INSTITUTE members who plan to include New Orleans in their itineraries to write to him at 8131 Oleander Street, New Orleans, or to telephone him at Galvez 1501 or University 2782, and he will arrange a luncheon or other meeting with members of the Louisiana Chapter, primarily for the contact with the membership and/or discussions, inclusive of the objectives of the AIC.

Consulting Chemists Elect

The Association of Consulting Chemists and Chemical Engineers, Inc., 50 E. 41st St., New York 17, N.Y., elected the following officers for one year terms: President, Erwin Di Cyan, consulting chemist, Di Cyan & Brown, New York, N.Y.; vice president, Earl D. Stewart, director of research, Schwarz Laboratories, Inc., New York, N.Y.; treasurer, Robert S. Aries, F.A.I.C., consulting chemical engineer, Robert S. Aries & Associates, New York, N.Y., and secretary, Albert Parsons Sachs, F.A.I.C., consulting chemical engineer, New York, N.Y.

The following councilors were elected for three-year terms: Charles L. Mantell, consulting chemical engineer, New York, N.Y., Nicholas M. Molnar, F.A.I.C., consulting chemist, Molnar Laboratories, New York, N.Y., Maurice S. Sage, consulting chemist, Sage Laboratories, Inc., New York, N.Y., Frank A. Strauss, Barsky & Strauss, Inc., New York, N.Y., and Lincoln T. Work, F.A.I.C., consulting chemist, New York, N.Y.

Johnson Appointed Vice President

Dr. William R. Johnston, F.A.I.C., formerly director of research, has been appointed vice president in charge of research of Standard Brands, Inc. He was first employed by Standard Brands in 1933 as research chemist. He is a graduate of the University of Washington, and he received the Ph.D. degree in physical chemistry from Johns Hopkins University. He is vice president in charge of the Activities Committee of the Associates Quartermaster Food and Container Institute for the Armed Forces.

Bjorksten Laboratories to Expand

Dr. Johan Bjorksten, F.A.I.C., of Bjorksten Research Laboratories, Inc., Chicago, Illinois, and Madison, Wisconsin, announces that the firm has purchased a 168-acre tract of land near Madison, Wisconsin, on which buildings will be erected to house new testing units, scientific equipment, and laboratories.

Employment Discrimination in the Chemical Industry

Albert J. Weiss

The Bureau on Jewish Employment Problems,

130 *N. Wells Street, Chicago, Illinois*

(A paper presented before the Chicago Chapter, AIC.)

THE subject of employment discrimination is too infrequently placed before the business community. Moreover, not until business and the professions accept the responsibility to participate in its solution will any real beginning be made toward the elimination of job barriers, based on race, religion, or national origin.

It may be helpful to discuss the orginization which I represent. The Bureau on Jewish Employment Problems is a private agency, maintained by the Jewish Community in Chicago to engage in activities for the elimination of employment discrimination against Jews and other minority group workers. We receive complaints of employment discrimination and investigate charges. Where discrimination does exist, we take the matter up with the firm on a confidential basis and attempt to persuade the employer to adopt fair practices. In the twelve years of our existence, we have had such negotiations with over two-thousand business firms in Chicago, and found that, while a substantial proportion agreed to a revision of their policies, the balance of the firms either gave superficial and wholly inadequate attention or meaningless lip-service. I mention this as background for what follows.

General Discrimination

Intergroup relations of which fair employment is most central, most important, is our Number One social problem today. The extent of such discrimination underlines its importance. In a 1948 survey of equality of opportunity for employment, the Illinois Interracial Commission found that 51 per cent of the larger employers in Illinois did not employ a single Negro worker. What non-white employment there is, is clustered in a few firms in each industry, and almost totally in the non-skilled and menial jobs. For instance, 25 per cent of the firms employed 85 per cent of all non-white workers. While 31 per cent of white workers were in white-collar jobs, only 1.6 per cent of non-white workers were in such categories. Conversely, while 17 per cent of white workers were in labor jobs, practically half of all non-white workers were limited to unskilled classifications. The Illinois Interracial Commission survey also found that 60 per cent of the job openings available through the ISES offices in the Chicago Metropolitan area car-

ried discriminatory specifications barring members of racial, religious, or nationality groups.

This 60 per cent did not include an additional substantial percentage of orders on which, by tacit agreement, minority group workers are never referred even in the absence of discriminatory specifications. The State Commission also found that commercial employment agencies give no service to Negro workers (except in one or two segregated agencies supplying chiefly service workers) and that Jewish workers get only a limited service from such agencies. Similarly, the Commission found that over 100,000 discriminatory help-wanted ads are published annually.

Discrimination in the Chemical Industry

Turning more specifically to the chemical industry, we find here, too, that while 10.9 per cent of employment was held by non-whites, 50.9 per cent of the chemical firms had not a single non-white employee.

Spelled out in concrete terms, this means one oil company with 4000 employees and not a single non-white worker; a pharmaceutical concern with 3000 employees, only 30 of whom are non-white; a gas-producing company with 600 white employees, and no non-whites; two other oil companies with 1800 and 1300 employees respectively, neither of which employ any non-whites; an asbestos company and a rubber company, each employing approximately 400 employees, neither of which employ any non-whites.

Of a random list of 20 such firms employing a total of 14,000 workers, 13 employ no non-whites; the percentage of non-white workers of all 20 firms is 2 per cent—and not a single non-white employee in the 20 firms is in a professional, managerial, clerical, or sales capacity.

Similarly, 56.3 per cent of the job openings placed by chemical firms with the ISES carried discriminatory specifications—the highest percentage of any of the twenty-six industrial classifications, and almost twice the statewide average.

On a basis of occupational level of non-white workers in the chemical industry in Illinois, only one-tenth of one per cent of all clerical and sales workers are non-whites, while 53 per cent of all service workers and 31 per cent of all unskilled workers are non-white. On the other hand, the chemical industry had the highest percentage of non-white workers in professional and managerial occupations: 4.4 per cent of all workers in those categories.

About 3.5 per cent of all complaints of discrimination against Jewish workers received at theBJEP over the last twelve years were with reference to the chemical and allied industries. Both commercial employment agencies and college placement bureaus have indicated severe bar-

riers in this industry erected against Jewish workers.

Similarly, the war- time FEPC reported in the first year and a half of its operations that 140 or 3.5 per cent of complaints received were in this industry, of which 95 were on the basis of race, 22 on the basis of religion, and 18 because of national origin.

Again, the New York State Commission against Discrimination reports that over its four years of operations, 143 or 2.5 per cent of all complaints were in this industry. Of the 127 firms involved, 63 per cent were found to have discriminatory policies or practices.

Methods of Dealing with the Problem

In general, two methods of dealing with the problem have been developed; the voluntary educational approach, and the method of compulsory legislation.

In the first category, agencies like the Bureau and the Urban League have found that this approach is at best only a partial one. This experience has been buttressed recently by that of the Cleveland Voluntary Plan the Committee on Employment Practices.

The voluntary plan was proposed in December, 1948, by the Cleveland Chamber of Commerce admittedly as a device to prevent passage of an effective FEPC ordinance. After thirteen months of thoroughly competent program direction, the Voluntary Plan proved to be so inadequate in eliminating employment discrimination that the Cleveland Chamber of Commerce not only abandoned their program but now are advocates of compulsory legislation, and testified for the ordinance before the Cleveland City Council.

As the *Cleveland Press* of January 31st says: "Most important, we learned that a voluntary FEPC, no matter how diligently and sincerely run is almost valueless. The voluntary plan simply wasn't enough. There was no noticeable change in the employment of minority groups. There was plenty of goodwill, but practically no jobs."

While Cleveland's voluntary plan failed utterly in persuading Cleveland department stores to employ Negro salesclerks and clerical workers, literally thousands of Negro workers are now employed in such categories in department stores in cities and states which have effective FEPC laws. The voluntary plan failed utterly in eliminating discrimination in employment agencies while significant advances have been made under FEPC legislation. The New York State Employment Service, for instance, cooperating with an FEPC law, places four to five times the proportion of non-white workers that the Illinois State Employment Service does — despite the fact that New York has proportionately less

non-whites and, in recent months, more unemployment.

Results of Discrimination

As a final note, I believe that as professional men you may be interested in the social and economic costs of discrimination. Various estimates have been made of direct economic loss. Leo Cherne of the Research Institute of America puts it as high as fifteen billion dollars annually. Locally, it has been estimated that 45 per cent of the city's tax revenues are poured into areas inhabited by minority group workers for welfare agencies, for health services, for fire protection, for law enforcement and, at the same time, far less than its proportionate share of taxes comes from such areas.

Every employer in Illinois, whether he discriminates or not, pays a direct tax into the Unemployment Insurance fund because of the fact that while white unemployment insurance claimants are unemployed an average of three weeks, non-white workers must wait closer to fifteen weeks.

The difficult housing situation in the Negro community, the fact that only 300 beds outside of the County hospital are available to Negro patients—all of these and many more can be, in a large measure, laid at the door of employment discrimination.

The solution of this problem is a difficult and complex one. There is no pat answer and no gimmick that can give us a Utopian answer. It is only through a dedicated leadership for many years to come from all the elements of the community, the churches, the schools, the business community, labor, and government, that an answer will be found.

But it is in particularly this kind of professional association, with its influence in so many of the major employing concerns, that most productive action can be initiated. I urge you to give most serious consideration to this social tragedy.

Date Changed for Pittsburgh Conference

The 1951 Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy will be held at the William Penn Hotel, Pittsburgh, Pa., March 5th to 7th (formerly announced as Feb. 28th to March 2nd). The Conference is jointly sponsored by the Analytical Chemistry Group of the Pittsburgh Section of the American Chemical Society and the Spectroscopy Society of Pittsburgh. An exposition of modern laboratory equipment will be featured.

Kramer Elected Vice President

The Board of Directors of Evans Chemetics, Inc., 250 East 43rd Street, New York 17, N.Y., has elected R. A. Kramer as vice president in charge of Sales. For the past nine years, he has been sales manager.

The Chemist Should Not Be an Introvert

Kenneth C. Longman, M.A.I.C.

Research chemist, Ethicon Suture Laboratories, New Brunswick, N.J.

(Some thoughts inspired by the statement, "The Chemist is the introvert," in Paul Slawter's article, August CHEMIST, page 315.)

SINCE the alchemist era, the chemist has been pictured by some people as a sinister man in a secluded room holding a frothing test tube. Today some people still place him in the absent-minded professor class and are not too anxious to meet and talk to him. Because they shun him, he is classed as an introvert. However, the modern chemist is not an introvert, or, at least, he should not be one.

In earlier years, the chemist may have been an introvert who spent all his time in his laboratory working hard, and who never cared to meet people because they laughed at him when he tried to explain the complex nature of his work. Nevertheless, these chemists set up the basic concepts of chemistry and built the whole groundwork as we know it today, even though some persons shunned them as they did the witches of Salem. Such persons cannot understand, even today, that the vastness of the material and the subjects with which the chemist must be acquainted result in the thoughtful, secluded lives that some chemists lead.

It is admitted that even some modern chemists have more tendencies toward being introvert than others, but modern chemistry with its many varied branches is not the cause of this introversion. The chemist should be classed as an introvert or an extrovert only from his early background and not from his education or his occupation. He had these personality traits long before he became a chemist. Some have said that the real extrovert will not make a good chemist. I contend that the real introvert will not make a good chemist either.

The modern chemist should not be tied down to a laboratory bench and be made to eat, sleep and talk nothing but chemistry. If he is made to do this, he will soon cease to be a good chemist. He must take an active part in other things (people included) around him, or he will soon be left behind and become stagnant.

Let us look at two definitions from the dictionary:

> Introvert—returning to one's interest upon oneself.
> Extrovert—turning of one's interest toward the outside world.

From these definitions it is easy to see that if the modern chemist should become an introvert, he would also

become self-centered and by such action lose many opportunities to better himself, his occupation, and his social life. Such a chemist, with no interest in his home, community, and government, would soon become no better than a piece of laboratory equipment. His work, actions, and soon his thinking would reach the mechanical stage.

Conversely, the modern chemist must know what the public is doing and wants, so that he can best suit his research in that direction. If he allows himself to be shoved away in a laboratory, his future and the future of his chosen occupation would revert back in time to the alchemist era, so far as public opinion is concerned. Instead, he must be an able speaker to explain his ideas to the company executives, to explain away the mystery of the laboratory to his neighbor, and to show his fellowman what science has given to the world and what it will continue to give, if it has the opportunity. If all chemists were introverts, chemistry would not be on the pedestal that it has achieved in the last half-century.

The modern chemist must be able to think clearly, to use his creative talents, to talk effectively, and to fight for his rights as an individual. Yet he should have the polish of a diplomat in his dealings with other people. Otherwise, many important possibilities for the practical use of chemistry will fall by the wayside. How many times have you been talking to another person when his casual comment has given you a new idea on how to solve one of your present problems? How many times have you given someone two ideas to work on instead of just one? Would the real introvert stick out his neck this far? The modern chemist has to do just that. Yet, the extrovert may stick his foot in his mouth more often than the introvert, but a chemist's work should not be discredited because of a mistake now and then. Instead, this work should be judged by its quality, the number of good ideas the chemist has, and how well he can plan and handle any task assigned. If all chemists were introverts, they would soon need a union to fight their battles for them.

I do not wish to create the impression that the introvert chemist is not good for chemistry. The field of chemistry with all its numerous ramifications can always use a good man. I am only asking that the chemist be judged objectively on his individual merits by his friends and his employers, rather than on some subjective personal ideas as to what a chemist should say, how he should act, what he should hear, and how he should think. Let the chemist be himself; he is a human being!

To you, the chemist, I can only say that you should not hide in your laboratory, or you will be left there. You can not hide and expect the outside world to respect you and to

be eager to seek you out. If you have questions, keep asking them until you receive the right answers. If you have an idea, express it even though it may sometimes be wrong. If this is being an extrovert, be one. On your inquisitive searching mind and broad shoulders rests the future of your chosen profession.

Howard to Receive Perkin Medal

Henry Howard, F.A.I.C., long-prominent in the chemical industry and for twenty-two years chairman of the executive committee of the Manufacturing Chemists' Association, has been selected to receive the 1951 Perkin Medal, according to an announcement by Dr. Gustavus J. Esselen, F. A.I.C., honorary chairman of the American Section of the Society of Chemical Industry, which sponsors the award.

Mr. Howard, born in Jamaica Plain, Boston, Mass., was for thirty-two years connected with the Merrimac Chemical Company (now part of Monstanto Chemical Company), and for ten years subsequent to that, he was successively director of the New Products Department, director of research and development, and consultant to the Grasselli Chemical Company, now a part of E.I. du Pont de Nemours Company, Inc. Eighty-nine U.S. patents have been issued to Mr. Howard, covering principally processes of manufacture of sulfuric and hydrochloric acids, alum and other heavy chemicals, and the specialized equipment required in chemical manufacturing plants. He is a charter member and past president of the American Electrochemical Society (now The Electrochemical Society, Inc.), past president of the American Institute of Chemical Engineers, and a member of the American Chemical Society.

Throughout his life, Mr. Howard has been an ardent yachtsman. He was a chief promoter of the Sonder Class in yacht racing and was intimately associated with all phases of international yacht cruising and racing. Among his yachting friends in Europe were the late Kaiser Wilhelm and the late King Alfonso.

Mr. Howard's contributions to chemical industry include developments connected with sulfuric acid production, the use of Spanish pyrites as a raw material, the development of British Guiana bauxite deposits, and the invention and improvement of chemical instruments and equipment. He was a pioneer in labor relations and wrote the original workmen's compensation law of Massachusetts. Through the Manufacturing Chemists' Association, he was a key person in the development of the American organic chemical industry during and following World War I.

The presentation of the medal to Mr. Howard will be made in New York on April 27, 1951.

Chemical Plant Construction

The Atomic Energy Commission announces that 250,000 acres on the Savannah River, near Aiken, S.C., have been selected as the site of plants for the production of atomic materials by E. I. du Pont de Nemours & Co. Construction will start early in 1951.

National Lead Company is constructing two new sulfuric acid plants, one in St. Louis, Mo., and the other in Sayreville, N.J.

Heyden Chemical Corporation will spend $1,175,000 for a new power plant and a new manufacturing unit for the production of pentaerythritol, at its Garfield, N.J., plant.

General American Transportation Corporation has opened a fifth Public Tank Storage Terminal for storage of chemical and petroleum products at 67th and Archer Streets, Chicago, Illinois.

Pennsylvania Salt Manufacturing Company is installing a new plant for the production of agricultural chemicals at Montgomery, Alabama.

Diamond Alkali Company has purchased the chromic acid business of E. I. du Pont de Nemours and Company at Wilmington, Del. A $5,000,000 expansion program for Diamond's sodium bichromate manufacturing plants, located at Kearny, N.J., and Painesville, Ohio, is under way.

Olin Industries, Inc. has purchased a substantial interest in the Harwid Company, Cambridge, Mass., manufacturers of polyethylene film. Now under construction is Olin's new plant for the production of cellophane at Pisgah Forest. N.C.

The Goodyear Tire and Rubber Company's synthetic rubber plant at Akron, Ohio, ordered reactivated by the government, will start producing within three months. A $1,000,000 expansion program at Goodyear's Los Angeles plant, for the production of rubber Airfoam cushioning material, was announced.

The Calco Chemical Division of American Cyanamid Company has started construction on additional facilities for the production of anthraquinone at Bound Brook, N.J.

F. J. Stokes Company has launched a $700,000 expansion program for increased facilities to manufacture industrial machinery, at Philadelphia, Pennsylvania.

Paint and Varnish Symposium

Dr. Max Kronstein, F.A.I.C., adjunct associate professor of chemical engineering, was in charge of arrangements for the New York University College of Engineering's third annual varnish and paint chemistry symposium, held November 18th, at the college. He also presented a paper on "Further Investigations on the Solid State of Film-forming Materials," at the symposium.

AIC Members Elected

Dr. Samuel M. Gordon, F.A.I.C., vice president and director of research of Endo Products, Inc., Richmond Hill, N.Y., has been elected chairman of the Metropolitan Long Island Sub-section of the American Chemical Society. The chairman-elect is Dr. Herman F. Mark, F.A.I.C., professor of organic chemistry at Brooklyn Polytechnic Institute. Dr. Bernard L. Oser, F.A.I.C., president of Food Research Laboratories, Inc., Long Island City, N.Y., was elected a director.

Los Angeles Offices

The Hagan Corporation, Pittsburgh combustion and chemical engineering firm, and its subsidiaries, Calgon, Inc., Hall Laboratories, Inc., and The Buromin Company, have established a new Los Angeles District Office at 3931 Tweedy Boulevard, South Gate, California. The office will also represent Bull & Roberts, associate, in the marine engineering field.

Gelman to Vico Products

George Gelman, F.A.I.C., resigned as technical director of the Quartermaster Food and Container Institute for the Armed Forces, as of November fourth. He is now vice president of the Vico Products Company, 415 W. Scott St., Chicago, Illinois, manufacturers of yeast, yeast derivatives, hydrolysates and vitamins.

Armour Research Appointment

Clark E. Thorp, F.A.I.C., chairman of chemistry and chemical engineering research of Armour Research Foundation, Chicago 16, Illinois, announces that Dr. Edward J. Schwoegler, former technical director of Nox-Rust Chemical Corporation, has joined the staff of the Foundation as research organic chemist. Dr. Schwoegler received the doctor's degree from the University of Wisconsin. He was formerly with Wyandotte Chemical Corporation and with Sinclair Refining Company.

Pittsburgh Conference

The 1951 Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy will be held at the William Penn Hotel, Pittsburgh, Pa., March 5 to March 7, 1951. An exposition of modern laboratory equipment will be a feature of the Conference.

Bjorksten Expands Staff

Dr. Johan Bjorksten, F.A.I.C., president of Bjorksten Research Laboratories, announces the appointments of Kenneth L. Sayre, Gordon W. Andersen, and Edward G. Appel, to the staff. Dr. Howard Lyle Gottlieb was named development chemist. Currently the Laboratories are expanding their Chicago and Madison (Wis.) staffs, in response to the industrial trend of having more research done in the Middle West.

Eager Joins AIC Staff

Doris Eager, M.A.I.C., has joined the headquarters staff of the National Office of THE AMERICAN INSTITUTE OF CHEMISTS. Miss Eager was formerly connected with the Bureau of Employment of The Chemists' Club, New York, N.Y.

Waitt Joins Aries

Dr. Robert S. Aries, F.A.I.C., president of R. S. Aries & Associates, 400 Madison Avenue, New York, N.Y., announces that Major General Alden H. Waitt (Ret.), former chief of the Chemical Warfare Service, has joined the organization. Gen. Waitt, who holds the B.S. and M.S. degrees from Massachusetts Institute of Technology, was a member of the Committee on Chemistry and Chemical Technology, National Research Council, from 1945 to 1949, and served as U.S. delegate to the International Congress of Pure and Applied Chemistry, London, in 1947, and to the International Congress of Industrial Chemistry at Brussels, in 1948. He is the author of "Gas Warfare" and numerous articles for civilian and military journals.

Fisher Appointment

Fisher Scientific Company, 717 Forbes Street, Pittsburgh 19, Pa., announces that J. William Geisler has joined the staff as petroleum apparatus engineer, to advise on related matters of engineering, manufacture, and distribution.

New Company Organized

The organization of a new company, Continental Oil Black Company has been announced by R. I. Wishnick, president of Continental Carbon Company, and L. F. McCullom, president of Continental Oil Company, joint owners. A $1,500,000 plant is being erected at Lake Charles, La., designed to manufacture 25-million pounds annually of high abrasion furnace black from oil. Completion is expected early in 1951.

Dr. J. Leon Shereshefsky, F.A.I.C., head of the Chemistry Department of Howard University, Washington, D.C., left the United States in September to serve as visiting professor of physical chemistry at the Hebrew Institute of Technology, Haifa, under a State Department grant-in-aid. Dr. Shereshefsky served as research chemist and group leader on the Manhattan Project, Columbia University, during World War II.

Pennsalt Expands

The Pennsylvania Salt Manufacturing Company announces that its new plant for manufacturing improved Erusto Sour and other laundry products has gone into production at the Calvert City Works of the company. This is the first completed unit in a series of planned extensions to Pennsalt's basic hydrofluoric and sulfuric acid plants.

Necrology

Thomas D. Dudderar

Thomas Dixon Dudderar, chief of the General Laboratory Section, Picatinny Arsenal, Dover, N.J., died October 7, 1950, at the age of forty-two. He was born in Pittsburgh (Glenshaw), Pa. He received the A.B. degree with honors from Marietta College, Marietta, Ohio, in 1931.

He joined the Ordnance Department at Picatinny Arsenal, Dover, N.J., in 1931 as a junior chemist, advancing from head of the Analytical Laboratory to chief of the General Laboratory Section.

He specialized in analytical chemistry problems arising in connection with the research and development activities conducted at Picatinny Arsenal. He was a member of The American Ordnance Association and Phi Beta Kappa. He had been a Member of THE AMERICAN INSTITUTE OF CHEMISTS since 1945.

He is survived by his wife, Janet, a son, Thomas Dixon, and a daughter, Susan.

Charles J. Holland

Charles J. Holland, New York patent attorney, died November 24, 1950, at the age of sixty-nine, at his home in Greenwich, Conn., after a long illness.

He was born in Brooklyn, N.Y., and received the B.A. and M.A. degrees from New York University. In 1916 he opened his own office in New York, N.Y., where he specialized in chemical and metallurgical patents.

He was a member of the New York County Lawyers' Association, and a Fellow of THE AMERICAN INSTITUTE OF CHEMISTS since 1932.

He is survived by his widow, Mrs. Katherine Rowe Holland, and two daughters.

Funds Sought for Books

The latest books on physics, chemistry, chemical engineering and metallurgy are greatly needed at the University of Panjab, Lahore, Pakistan, according to CARE, 20 Broad Street, New York 5, N.Y. Pakistan is one of twenty countries now reached by the book plan operated by CARE in cooperation with UNESCO. Chemists who wish to help provide books may send contributions to the CARE Book Fund. Sums under $10 are pooled in the general fund, but donors of $10 or more may designate the country, institution, and book category (physics, chemistry, chemical engineering, and metallurgy). CARE makes delivery in the donor's name and returns a receipt signed by the recipient.

Jenness to Kennecott Copper

Dr. Leslie G. Jenness, F.A.I.C., has been appointed assistant to the president in charge of research of the Kennecott Copper Corporation, it was announced recently by Charles R. Cox, president. Dr. Jenness received the M.S. degree from the University of Maine, and the Ph.D. from Columbia University. For the past three years, he has been director of research of the Hum Ko Company, Memphis, Tenn. Previously, he was division head of Linde Air Products Company. He has also instructed in chemical engineering at the University of Maine and at Pratt Institute, Brooklyn, N.Y. He is the author of articles on metal recovery, chlorination, hydrogenation, oils and fats, fungicides and insecticides.

Evans' Staff Additions

Evans Research & Development Corporation, 250 E. 43rd Street, New York, N.Y., announces that Samuel Brown Williams has joined the staff as research chemist. E. Mitchell Becker and Margaret Kearney Baxter have been appointed research assistants.

Dr. W. Conard Fernelius, F.A.I.C., chairman, Department of Chemistry, Pennsylvania State College, spoke at the Metropolitan-Long Island Sub-Section of the American Chemical Society, October 27th, on "The Structure of Coordination Compounds," at the Hotel Granada, Brooklyn, N.Y.

Research Corporation Appoints

Charles H. Schauer has been appointed director of grants of The Research Corporation, New York, N.Y., to succeed Dr. Robert R. Williams, who is now on a trip to the Orient to foster the nutritional improvement of rice. On his return next spring, Dr. Williams will continue as chairman of the foundation-administered Williams - Waterman Fund, of which he is co-founder, and member of the Advisory Committee on Grants.

Dr. E. H. Volwiler, F.A.I.C., spoke on "Chemistry and Drugs," at the American Chemical Society's New York Section meeting, in New York, N.Y., December 8th. At the same meeting, Dr. Herman F. Mark, F.A.I.C., gave his "Impressions of a Chemist in India, Israel and Europe."

Destileria Universal in Operation

Dr. Robert S. Aries, F.A.I.C., president of R. S. Aries & Associates, New York, N.Y., announces that a new $600,000 plant, Destileria Universal, to make absolute alcohol from molasses in Ciudad Trujillo, Dominican Republic, is now in operation. Its rated production is 7,200 gallons per day of absolute ethyl alcohol to be utilized for blending with gasoline.

Fair Elected Chairman

Dr. W.F. Fair, Jr., F.A.I.C. advisory fellow at Mellon Institute and supervisor of the Koppers Company, Tar Products Division, Westfield, N. J. Laboratory, has been elected chairman of the New York Metropolitan Section of the National Association of Corrosion Engineers for 1951.

Society of Chemical Industry

The 1951 Annual Meeting of the Society of Chemical Industry will be held in London, England, July 9th to 13th, 1951.

The 1952 Annual Meeting of the Society of Chemical Industry will be held in New York, N.Y. during September, 1952.

N. Y. Academy of Sciences

At a meeting, November 8th, of the New York Academy of Sciences, Dr. Jean-Jacques Trillat, director of the X-ray and Electronics Laboratory of the French National Scientific Research Center, spoke on new methods of using X-rays and electrons in laboratory investigations of metals, paints, and oils. Dr. Herman F. Mark, F.A.I.C., of Brooklyn Polytechnic Institute, introduced Dr. Trillat and Dr. Clifford G. Shull, of the Oak Ridge National Laboratory, who spoke on "Recent Progress in Neutron Scattering."

Remington Medal

Dr. Ivor Griffith, F.A.I.C., president of the Philadelphia College of Pharmacy and Science, spoke at the meeting of the New York Branch of the American Pharmaceutical Association in memory of Dr. Edwin L. Newcomb. The meeting was the occasion for the posthumous presentation of the 1950 Remington Honor Medal, which had been awarded to the late Dr. Newcomb for his outstanding achievements in pharmacy.

Peter Spence & Sons, Ltd., Chemical Manufacturers, have published a limited edition of 1,100 numbered copies of "The Earliest Chemical Industry," a 350-page book in commemoration of their centennial anniversary in November, 1946. This model of the art of book production required six years of preparation. At $50.00 a copy, it is available through C. Tennant, Sons & Co., 100 Park Avenue, New York 17, N.Y.

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Maurice Siegel, *Baltimore Chapter*
Foster D. Snell, *Past President*
Raymond Stevens
New England Chapter
Florence E. Wall, *At-Large*
James R. Withrow, *At-Large*

November Meeting

The 272nd meeting of the National Council was held November 8, 1950, at 6 p.m. at The Chemists' Club, New York, N.Y. President Lawrence H. Flett presided.

The following officers and councilors were present: Messrs. L. H. Flett, F. A. Hessel, L. B. Hitchcock, C. P. Neidig, H. Robinette, F. D. Snell, L. Van Doren, Miss F. E. Wall, J. R. Withrow, and L. T. Work. V. F. Kimball and K. M. Herstein were present. The minutes of the previous meeting were accepted.

President Flett reported that plans for the Annual Meeting in Niagara Falls, Ontario, next May were progressing and that the exact date will soon be set.

Dr. Work reported that he had presented the Honor Scroll of the Chicago Chapter to Dr. Miner, at an excellent meeting with more than two-hundred persons present.

President Flett urged the members

of the Council to give a great deal of thought relative to the activities in which the AIC should engage.

The report of the Treasurer was presented and accepted.

A letter from Cyril S. Kimball, accepting the appointment as chairman of a Committee to Arrange for an AIC dinner during the week of the International Congress in September, 1951, was presented.

Mr. Neidig reported that the Pennsylvania Chapter planned meetings in December, February, and May.

President Flett announced that he had appointed the following Committee to Consider Scientific Manpower: Dr. Work, Dr. Snell, Dr. Norman A. Shepard, and Dr. Withrow.

Drs. Work and Hitchcock reported for the Committee on Honorary Members.

The following new members were elected:

FELLOWS

Adams, Frederick W.
Director of Research, The Spool Cotton Co., 745 Fifth Avenue, New York, New York

Bender, Max
Colloid & Physical Chemist, American Cyanamid Co., Calco Chemical Division, Bound Brook, New Jersey

Bewley, Frank T.
Chemist, Chemical Division, Braun Corp., 2260 E. 15th St., Los Angeles, California

Chase, George O.
Senior Chemist, Technical Development Department, Hoffmann-La Roche, Inc., Nutley, New Jersey

Hershey, Alan U.
Technical Director, McCloskey Varnish Company, 5501 East Slauson Ave., Los Angeles, California

Klingsberg, Erwin
Staff Assistant to Research Director, Calco Chemical Division, American Cyanamid Co., Bound Brook, New Jersey

Kritchevsky, Jerome
General Manager, Ninol Laboratories, 1719 S. Clinton Street, Chicago, Illinois

Kutz, Russel L.
Chemist, Biochemical Research Department, Armour & Co., Chicago, Illinois

Modjeska, Richard S.
Director, Scientific Control Labs., 600 Blue Island Ave., Chicago, Illinois

Walton, Joseph L.
Commodity Industry Analyst, Chemical Division, U.S. Department of Commerce, Washington, D.C.

MEMBERS

Abel, James E.
Research Chemist, Technical Division, Picatinny Arsenal, Dover, New Jersey

Cella, John A.

Research Chemist, Fatty Acid Derivatives Section of Fats & Oils, Armour & Company, 1425 West 42nd Street, Chicago 9, Illinois

Grant, Norman H.

Chemist, Packinghouse Research, Armour & Co., U.S. Yards, Chicago, Illinois

Rees, Thomas

Chemist, Pharmaceutical Development, American Cyanamid Co., Calco Chemical Division, Bound Brook, New Jersey

Serenock, Joseph J.

Chemist, Research, Industrial Tape Corp., New Brunswick, N.J.

Shelly, Ralph R.

Technical Sales Representative, Tennessee Eastman Corp., 10 E. 40th Street, New York, N. Y.

Slawter, Paul B. Jr.

Vice President, The House of J. Hayden Twiss, Advertising, 225 Park Avenue, New York, N.Y.

REINSTATED TO FELLOW MEMBERSHIP

Bakken, Herman E.

Vice President & General Manager, Aluminum Ore Co., 1500 Mississippi Valley Trust Building, St. Louis, Missouri.

1951 Annual Meeting

The American Institute of Chemists

May 9, 10, 11

General Brock Hotel,
Niagara Falls, Ontario

Hosts: Niagara Chapter, A.I.C.

(Details in later issues of The Chemist)

New York State's Chemical Industry

The June, 1950, issue of *Industrial Bulletin,* official news magazine of the New York State Department of Labor, features "Survey of New York State Chemical Industry," subtitled, "State, Chemical Center of World in Vanguard of New Advances; its 1420 Plants Employ 72,000." The survey was continued in the July and August issues.

New Plastic-Tile Plant

Hachmeister - Inc., 2332 Forbes Street, Pittsburgh, who recently purchased the former Avco, Inc., plant at Circleville, Ohio, announces that a long term lease has been signed with the Plastic Corporation of America, manufacturers of plastic wall tile.

AIC Activities

C. P. Neidig, F.A.I.C.

New York

Chairman, Dr. M. J. Kelley
Vice Chairman, Dr. A. F. Guiteras
Secretary-treasurer, G. A. Kirton
Representative to National Council, Karl M. Herstein

The New York Chapter met, December fifth, at the Hotel Commodore, New York, N.Y. to hear a Panel Discussion on "Your First Job." Speakers were W. Alec Jordan, Editor, *Chemical Industries,* "How to Find a Job in the Publishing Field"; Martin Buck, assistant to the vice president of Shell Chemical Company, "What Does the Employer Want?"; Dr. Patrick Moore, manager, New Development Division, American Cyanamid Corporation, "Is Your Future Slanted Towards New Product Development?"; E. E. Fogel, assistant sales manager, Carbide and Carbon Chemical Company, "The Job Interview," and Dr. Kenneth W. Newman, manager, Chemical Division, United Sterling Corporation, "What to Look For in Your First Job." Approximately one-hundred and fifty persons attended the meeting, many of whom lingered to talk personally about their individual problems to the speakers. Summaries of these talks are planned for a later issue of THE CHEMIST.

Honorary Membership Presentation

The New York Chapter will meet January 25th at the Hotel Commodore, New York, N.Y., to present Honorary Membership in THE AMERICAN INSTITUTE OF CHEMISTS to Jerome Alexander, F.A.I.C. Dr. Francis Turner will speak on the career of Mr. Alexander. AIC President Flett will present the certificate of Honorary Membership. A dinner at seven o'clock will precede the meeting. The Reinhold Publishing Corporation cordially invites all who attend the dinner to come to a reception to Mr. Alexander, which will be held at six o'clock.

Pennsylvania

Chairman, C. P. Neidig
Vice Chairman, Ronald J. Baird
Secretary-treasurer, John H. Staub
Representative to National Council, Hillary Robinette

The Pennsylvania Chapter held a meeting on December 7th at the Engineers' Club. The subject of "Development and Introduction of New Products" was discussed by Dr. William S. Lee of the Product Development Department of Pennsylvania Salt Manufacturing Company

and by Dr. Edward H. Riddle of the Special Products Department of Rohm and Haas Company. We had a very fine discussion after the most interesting talk by Drs. Lee and Riddle.

Washington

Chairman, Louis N. Markwood
Vice Chairman, Elizabeth M. Hewston
Secretary, Paul E. Reichardt
Treasurer, Dr. R. C. Roark
Representative to National Council, L. N. Markwood

A luncheon meeting of the Washington Chapter was held November 30th at the Tally-Ho Restaurant in Washington, D.C. The meeting was presided over by the chairman, Louis N. Markwood. Dr. Harry Fisher, of the National Research Council, treated the meeting to some most interesting comments on his recent trip to Milan, Italy.

Chairman Markwood, a recent European traveller himself, teamed with Dr. Fisher, following the latter's remarks, in answering questions posed by the most interested, but highly un-travelled, membership.

Following up on the success of the luncheon meetings, a midday meeting is being planned for January.

Ohio

Chairman, Dr. George F. Rugar
Chairman-elect, Dr. Otis D. Cole
Secretary-treasurer, Harold M. Olson
Representative to National Council, Dr. Malvern J. Hiler

The Ohio Chapter participated in the Second Annual Dinner of the Chemical Profession in Cleveland, Ohio, held November ninth at the Hotel Hollenden. The other sponsors were the Electrochemical Society, the American Institute of Chemical Engineers, and the American Chemical Society. The toastmaster was Howard E. Fritz, vice president, B. F. Goodrich Company. Dr. Sidney D. Kirkpatrick, F.A.I.C., vice president and editorial director of the McGraw-Hill publications, spoke on "The Chemical Profession and National Security." Gordon M. Juredine, F.A.I.C., and Dr. George F. Rugar, F.A.I.C., served on the staff of the Dinner Committee.

Egloff to Give Romanes Lecture

The Senatus Academicus of the University of Edinburgh has elected Dr. Gustav Egloff, Hon. A.I.C., to give the biennial "Romanes Lecture in Chemistry for 1951."

Dr. Egloff, who is vice president of the Third World Petroleum Congress, will attend the Congress, in The Hague, Holland, May 28th to June sixth, to lecture on "Polymerization of Olefinic Hydrocarbons."

New York Chapter Representative

Dr. Martin Meyer, who has been the Representative to the National Council for the New York Chapter, has resigned from this post, due to the pressure of duties associated with the national emergency. Karl M. Herstein, president of Herstein Laboratories, 128 Water Street, New York, 5, N.Y. has been elected to fill the unexpired term-of-office occasioned by Dr. Meyer's resignation.

For Your Library

Industrial Chemicals

By W. L. Faith, Donald B. Keyes, F.A.I.C., and Ronald Clark. John Wiley & Sons, Inc., 652 *pp.* 6" x 9¼". $8.00.

In this book, the authors have selected arbitarily a group of 106 industrial chemicals, and discussed each one in accordance with a predetermined outline: (1) Name and chemical formula. (2) Manufacturing processes in current use, including simplified flow-sheets and important variables. (3) Equations for the principal reactions involved: average yield expectation in per cent of theoretical. (4) Raw material requirements per unit weight of commercial product. In some cases, utility and labor requirements are shown. (5) Production chart for past twenty years. (6) Generalized use pattern. (7) Price chart for past twenty years. (8) Miscellaneous data, including physical properties, commercial grades, shipping regulations, and usual containers. (9) Economic aspects, generally including historical data, a discussion of competitive processes and products, recent trends in manufacturing and sales, actual and economic plant size, and approximate plant cost (as of 1946). (10) A map showing the location of manufacturing facilities in the United States.

In other words, the authors have supplied, for the chemicals which they have listed, the type of data which would require considerable searching through various publications and periodicals to assemble. It is here available in systematic form and ready at hand. The value of these needs no emphasis by the reviewer, who can only say that the chemicals treated are outstanding in their industrial importance. The treatment has been accurate for the most part, lucid and instructive at all times.

The reviewer recommends the volume, therefore, to all who have need for a handy miniature reference work, on Industrial Chemicals.

—Karl M. Herstein, F.A.I.C.

The Economics of the Printing Ink Industry

By Robert S. Aries, F.A.I.C., and Anthony Nickolaus, Chemonomics, Inc., 108 *pp.* 6½" x 9". $5.00.

This is an interesting survey of the present status of the printing ink industry. It is clearly written and well presented and should be in the library of every chemist that has anything to do at all in the printing ink industry.

—Dr. Frederick A. Hessel, F.A.I.C.

Rhenium—Dvi-Manganese

By J. G. F. Druce. The Macmillian Co. 92 *pp.* 5¾" x 8¾". $2.50.

The preparation and chemical properties of rhenium and its compounds have been assembled and the literature, patents, and uses thoroughly reviewed, in one convenient volume. This element is so rare and little known that the information is a worthwhile contribution to our knowledge.

—Dr. John A. Steffens, F.A.I.C.

The Chemistry of High Polymers

By C. E. H. Bawn. Interscience Publishers. 250 *pp.* 5¾" x 8¾". $4.50.

Macro-molecules as formed, their degree of polymerization, geometry and structure are broadly discussed. The mathematical treatment of their properties is quite complete and the book is systematic. The presentation is logical and instructive.

—Dr. John A. Steffens, F.A.I.C.

McGraw-Hill Directory of Chemicals and Producers

First edition, 1951. *McGraw-Hill Publishing Co., Inc.*, 558 *pp.* 6" x 9". $20.00.

This book has every promise of becoming as necessary to the chemical purchasing agent as his ability to say "no". The overwhelming majority of the chemicals of commerce are listed with the name of a primary producer. There is an additional section of thirty pages giving the names of producers of chemicals and their addresses. Trade names are included, but are cross-referred to the descriptive name of the material.

The receiver has had considerable occasion to consult the book since he received it, and while a few omissions have been noted, mainly he has found it exceedingly useful. Typography is large and clear, so that the book is a welcome addition to the literature of commercial chemistry. It is an absolute necessity for everyone dealing with the purchase of chemicals, and would be useful to indicate to teachers and students in colleges the present status of the chemical industry.

—Karl M. Herstein, F.A.I.C.

The Meson Theory

By Wolfgang Pauli. Interscience Publishers. 69 *pp.* 5½" x 8⅛". $3.00.

At least two kinds of mesons have been discovered; the capture of negative mesons by the lighter nuclei has not been observed, and recently, mesons have been produced artificially. The meson theory is therefore in a provisional state and the mathematical treatment as given in this book is only provisional.

—Dr. John A. Steffens, F.A.I.C.

Vacuum Manipulation of Volatile Compounds

By R. T. Sanderson. John Wiley & Sons. 162 *pp.* 5⅝" x 8⅝". $3.25.

This is a careful and meticulous book on details of manipulation of high vacuum apparatus, the safe handling of mercury and the production of low temperatures. It covers a specialized field of laboratory technique with eminent satisfaction.

—Dr. John A. Steffens, F.A.I.C.

Chemical Books Abroad

Rudolph Seiden, F.A.I.C.

John Sherratt & Son, Timperley, Cheshire: *The Chemists' Year Book* 1949, by E. Hope, 1255 pp. This handy reference book is similar in size and arrangement to the old, German "Chemiker Kalendar" which was published annually. A compilation of valuable chemical information, much of which is in table form. In addition to theoretical material, it contains many special analytical methods useful for various industries, formulas of pharmaceuticals, mathematical tables, a list of dates notable in the history of chemistry, etc.

Walter de Gruyter & Co., Berlin W. 35: *Lehrbuch der organischen Chemie*, by A. F. Holleman, revised by Friedrich Richter, 26th ed., 526 pp. with 97 ill., DM 22. For more than 50 years chemists have studied "Holleman," thus getting their introduction into chemistry through this well organized textbook. It brings not only factual material, with stress on structural formulas and relationships, but also the fundamental physical-chemical theories, newer biochemical findings, and some technical processes.

Wissenschaftliche Verlagsgesellschaft m. b.H., Stuttgart 1: *Einfuehrung in die Arzneibereitung*, by Fritz Gstirner, 1949, 342 pp. with 64 ill., DM 21.50. A brief description of the scientific and practical working methods employed in the preparation of remedies in their various application forms. It also includes hundreds of formulas as practical examples for the theories developed in the text. Unnecessary is the chapter on homoeopathic pharmacy.

• *Pharmaceutische Vorschriftssammlung*, by Horst Fey, 1950, 412 pp. DM 18.50. A compilation of the pharmaceutical formulas which have been official in Germany, supplemented by others of possible interest to drug and cosmetic manufacturers.

Verlagsgesellschaft Beobachter A.G., Basel 6: *Repertorium pharmazeutischer Spezialpraeparate, Supplement II*, by Herbert Ludwig, 1950, 462 pp., SFr. 32. The first two volumes of this encyclopedia of pharmaceutical preparations were reviewed in this column in December 1949.

The new supplement contains 350 specialties developed in the last 2 years and 2500 older ones, as well as additional data for 1000 pharmaceuticals and sera previously discussed in this "Repertorium" of highly informative value.

Verlag Dr. Dietrich Steinkopff, Frankfurt a/M.: *Praktikum der Kolloidchemie*, by H. Thiele, 1950, 227 pp. with 121 ill., DM 16. The wide field of theoretical and technical colloid chemistry is treated in 33 chapters, with emphasis placed upon experiments which can easily be made in the laboratory to acquaint students with the modern working methods of this science. A missarrangement of the index pages is confusing. • *Die Glaselektrode und ihre Anwendungen*, by Ludwig Kratz, 1950, 377 pp. with 77 ill., DM 41.50. A complete treatment of the glass electrode, its theory, methods of pH and rH determinations and practical uses in chemistry, pharmacy, biology, bacteriology, physiology, and medicine.

S. Hinzel Verlag, Zuerich 2: *Der Wirkungsmechanismus von Hormonen*, by Erich Vincke, 1950, 160 pp. with 10 ill., SFr. 10. An excellent monograph which deals critically with the great mass of published material about the chemical and physiological reactions of the classical hormones, i.e., with amino acid derivatives, proteo-hormones and steroids.

Verlag Chemie, Weinheim/Bergstrasse: *Die Phosphatierung*, by Willi Machu, 1950, 306 pp., with 138 ill., DM 26. The theory and technical application of the surface treatment of metals through phosphate coating, which is also known as parkerizing, atramentizing, or bonderizing. • *Fortschritte auf dem Gebiete der Phosphatierung*, 3rd vol., by W. Koehler, 1950, 141 pp. DM 7.80. This is a collection of 14 articles on the progress in the practical use of phosphate treatment of metals. They were originally printed in the "Archiv fuer Metallkunde" in the years 1948-49. Volumes 1 and 2 of this series were published in 1942 and 1943, respectively. • We have been asked to announce that the *Archiv der Pharmazie* is again being published by Verlag Chemie.

Elsevier Publishing Co., Amsterdam. (New York): *Organic Chemistry*, by Paul Karrer, 4th ed., 973 pp. $8.50. This is an excellent translation of the enlarged 11th German edition of this famous German standard work. The text correlates old-established principles with the latest theories and discoveries concerning aliphatic, carbocyclic, and heterocyclic compounds; a brief final chapter discusses interesting organic compounds with heavy hydrogen and heavy oxygen. A number of well selected tables and a list of dates concerning the history of organic chemistry conclude the volume.

Edwards Brothers, Ann Arbor, Michigan: *The German English and English-German Dictionary for Scientists, by O.* W. Leibiger and I. S. Leibiger, 1950, 756 pp. $8. Scientific dictionaries are always welcomed by those interested in foreign literature. This volume is of special value: it lists not only tens of thousands of well-known chemical, physical, mathematical, engineering, biological, medical, and other scientific terms, but also many thousands of words created in the last few years in the course of recent developments in high-polymeric chemistry, nuclear physics, radio, etc.

Information

"New Flexible Royalton Wash Bottle." Information may be obtained from the Meyer Scientific Supply Co., Inc., 221 Atlantic Avenue, Brooklyn 2, N.Y.

RP1989 "Pyrolysis of Polyisobutene (Vistanex), Polyisoprene, Polybutadiene, GR-S, and Polyethylene in a High Vacuum." 16 pp. 10 cents. Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.

"Wilson Dudgeon Model 38 Tube Expanders." Bulletin 380. Thomas C. Wilson, Inc., 21-11 44th Avenue, Long Island City 1, N.Y.

"Engelhard CO_2 Analyzer." Bulletin No. 710. Charles Engelhard, Inc.. 850 Passaic Avenue, East Newark, N.J.

"Small Riffle Sampler," for laboratory quartering of granular material. Information sheet. Precision Scientific Co., 3737 W. Cortland Street, Chicago 47, Illinois.

"Circular C475. Establishment and maintenance of the Electrical Units." 38 pp. illustrated. 25-cents. Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.

'Flovis, New Anti-gelling Agent." Information sheet. Glyco Products Company, Inc., 26 Court Street, Brooklyn 2, N.Y.

"New Heat-Sealing Adhesive," Information sheet. Polymer Industries, Inc., 11-08 30th Ave., Astoria, N.Y.

"Fine New Inexpensive Bacharach Laboratory Instruments." The Emil Greiner Co., 20-26 No. Moore St., New York 13, New York.

"How Lucius Pitkin Can Help You." Lucius Pitkin, Inc., 47 Fulton St., New York 7, N.Y.

"New Equipment Makes Solvent Extraction Practical in Industrial Applications." Information sheets. Otto H. York Company, Inc., East Orange, N.J.

"Zapon Primers and Primer Surfaces." Folder. Industrial Finishes Department, Atlas Powder Co., Stamford. Conn., and North Chicago, Illinois.

"New Patterson Condensed Catalog. No. CEC-49." 36-pages. The Patterson Foundry & Machine Company, East Liverpool, Ohio.

Information on Atomic Energy

The Atomic Energy Commission has discontinued its Document Sales Agency at Oak Ridge, Tenn. All AEC unclassified and declassified research reports which are available for sale can be secured from: Office of Technical Services, Department of Commerce, Washington 25, D. C. Payment should be made by money order or check payable to the Treasurer of the United States.

The Technical Information Division, ORE, will continue to make official distribution of such reports and to offer material to academic and research institutions on an exchange basis. Inquiries relative to such exchanges and inquiries concerning the availability of documents not offered for sale should be addressed to the Technical Information Division, ORE, U.S. Atomic Energy Commission, Oak Ridge, Tenn.

Condensed Chemical Dictionary

Reinhold Publishing Corporation, 330 West 42nd Street, New York 18, N.Y., announces that the new fourth edition of the *Condensed Chemical Dictionary* is now available. In revised form, it contains a total of 23,000 entries, which includes 5,000 entirely new items. The 800 double-column pages are thumb indexed. Price, $10.00.

The Journal of Polymer Science, which is completing its sixth year of publication, will be doubled in size in 1951. Issues will appear monthly and will comprise two volumes per year (Volumes VI and VII, 1951).

Lab World, 1930 Wilshire Building, Los Angeles 5, Calif., features a news article about the AIC, entitled, "Importance of Chemists Today Cited by National Organization," in its Nov. 1950 issue.

Condensates

Ed. F. Degering, F.A.I.C.

The Miner Laboratories

The scientific version of twinkle, twinkle, little star, reads:

Scintillate, scintillate, globule vivific;
How can I fathom thy nature specific?
Loftily poised in the ether capacious,
Strongly resembling a gem carbonaceous

The first crop of natural silk has been produced in Mississippi.

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Products developed during the last ten years accounted for about forty-five per cent of the sales of the Monsanto Chemical Company during 1948. Research does pay.

As early as 1936, rubber-asphalt paving was used on several sections of road, in the Netherlands, which successfully survived the heavy traffic of the German invasion.

Thioglycollic acid may be used to "deshine" seats of well worn blue serge trousers.

The (1) chemical spraying after planting and before seed germination, thus delaying weed growth until the cotton plants are large, and (2) flaming to control weeds, all at a cost of about $5.00 per acre compared to $12.00 to $15.00 the old way, may create new interest in cotton.

A reputedly successful fish lure consists of a minnow of metallic magnesium containing bicarbonate of soda and a fruit acid which reacts to give off realistic bubbles when in the water.

—Chemical Digest

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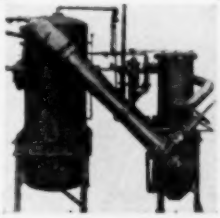

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Snell Appoints

Foster D. Snell, Inc., New York firm of chemical and engineering consultants, announces the appointment of Lyman H. Allen, Jr., as chief engineer. Mr. Allen was formerly assistant chief design engineer of American Viscose Corporation.

Publications Discontinued

The Department of Commerce, under the Defense Production Act, has transferred a group of its key personnel to the National Production Authority. This transfer has made it necessary for the Department to discontinue, perhaps temporarily, certain services, including the following publications of the *Industry Report* series: "Canned Fruits and Vegetables", "Chemicals and Drugs", "Coffee, Tea, Cocoa and Spices", "Fats and Oils", "Lumber, Plywood and Allied Products", "Rubber", "Sugar, Molasses and Confectionary."

Dr. Gustav Egloff, Hon, A.I.C., addressed the Third Annual Chicago Area Career Conference, held December 27th to 29th, at Illinois Institute of Technology, on "Chemistry as a Career." He was chairman of the Committee on Cooperating Agencies of the Conference. In connection with the Conference he spoke over Station WMAQ, December 21st, on the program of Myron Wallace and Buff Cobb; and over Station WJJD, December 24th, on "How Should A Career be Planned." Other participants on the latter program were Edward B. Simon, Cook County Superintendent of Schools; John T. McMahon, assistant director of the Division of Guidance of the Chicago Board of Education, and Ralph Habas, *Sun-Times* reporter.

Opportunities

Chemists Available

Organic chemist, research manager or director of laboratories. Ph.D., Protestant, family, age 45. Skilled in laboratory management, product development, and organic synthesis. Present specialization: Organic peroxides and intermediates (development and manufacture). Previous experience: Synthetic organic chemistry, antiseptics, mothproofing agents, technical service, teaching. Now employed as chief chemist of small company. Reply to Box 12, THE CHEMIST.

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For Business Analyst, Commodity Industry Analyst and Industrial Specialist to $6,400. Experienced applicants wanted. No written test. Education may be substituted for experience in positions paying up to $4,600 a year. Applications may be obtained from Civil Service regional offices or from most first or second class post offices.

U.S. Civil Service Position

Commodity Industrial Analyst (Chemical Products), GS-11, $5,406 per year. Incumbent will advise on operational problems relative to receipt, storage, preservation and issue of perishable oils. Contact the Civilian Personnel Office, Bureau of Supplies & Accounts, Dept. of Navy, Room 1052, Arlington Annex, Washington 25, D.C.

Amendment to Open Federal Civil Service

By executive order, appointments in Federal competitive Civil Service, except Presidential appointees and postmasters, shall be on a non-permanent basis.

To Increase Hemp Production

Armour Research Foundation of Illinois Institute of Technology recently sent five scientists to Costa Rica to aid in increasing the output of Manila hemp fiber, derived from the abaca plant.

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National Council Meetings

Meetings of the AIC National Council are scheduled to be held at The Chemists' Club, 52 E. 41st Street, New York, N.Y. on the following dates:

January 10, 1951
March 14, 1951
April 11, 1951
May (date not set) 1951
June 13, 1951

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First, PYREX brand glass No. 7740, a borosilicate glass in which the properties of mechanical strength, thermal and chemical resistance are ideally balanced for general laboratory application. Its formula assures high chemical stability and still provides exceptional resistance to thermal shock. Its low coefficient of expansion permits heavier construction than is possible with higher expansion glasses. It is adaptable to economical production and is the best glass available for over 99% of all requirements.

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Second, VYCOR brand glass No. 7900, is a 96% silica glass which is comparable with fused silica. It has the highest thermal resistance and its chemical stability toward acid and neutral solutions is also higher than any glass except fused silica. These properties, however, are obtained only by a unique manufacturing process somewhat more expensive than ordinary glass practice. Its use is recommended for the exceptional laboratory problem in which exceedingly high resistance to thermal shock or chemical stability is required.

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Third, Corning brand glass No. 7280 is a boron free glass of unusually high resistance to alkali. To achieve the resistance to alkalies a sacrifice of thermal resistance must be made and this is true of this glass. Manufacturing techniques limit somewhat the number of shapes into which it can be manufactured and it should be used primarily where extreme alkali resistance or boron free characteristics are required.

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